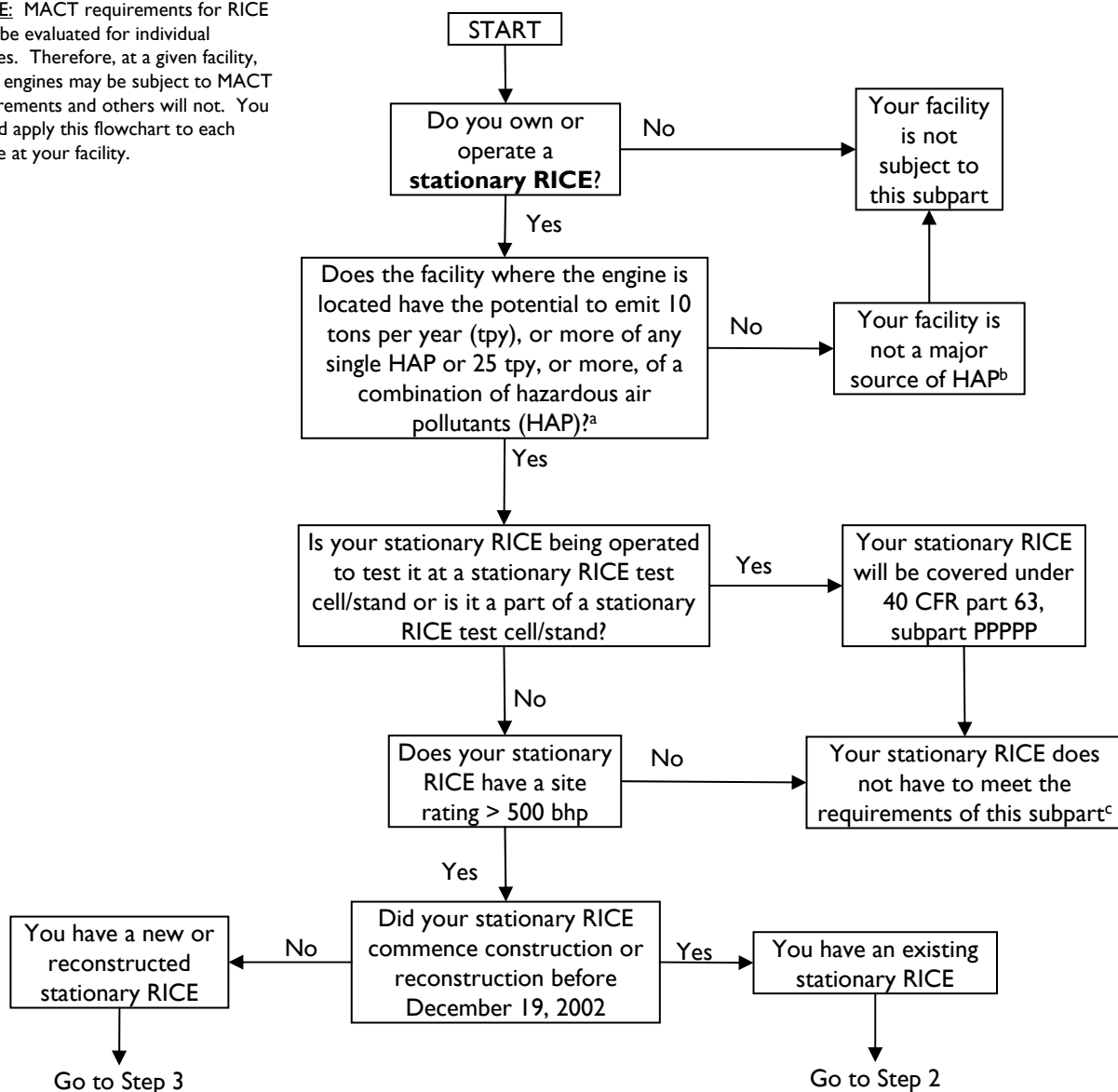


# Applicability Flowchart for National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE) 40 CFR part 63, subpart ZZZZ

**NOTE:** MACT requirements for RICE must be evaluated for individual engines. Therefore, at a given facility, some engines may be subject to MACT requirements and others will not. You should apply this flowchart to each engine at your facility.



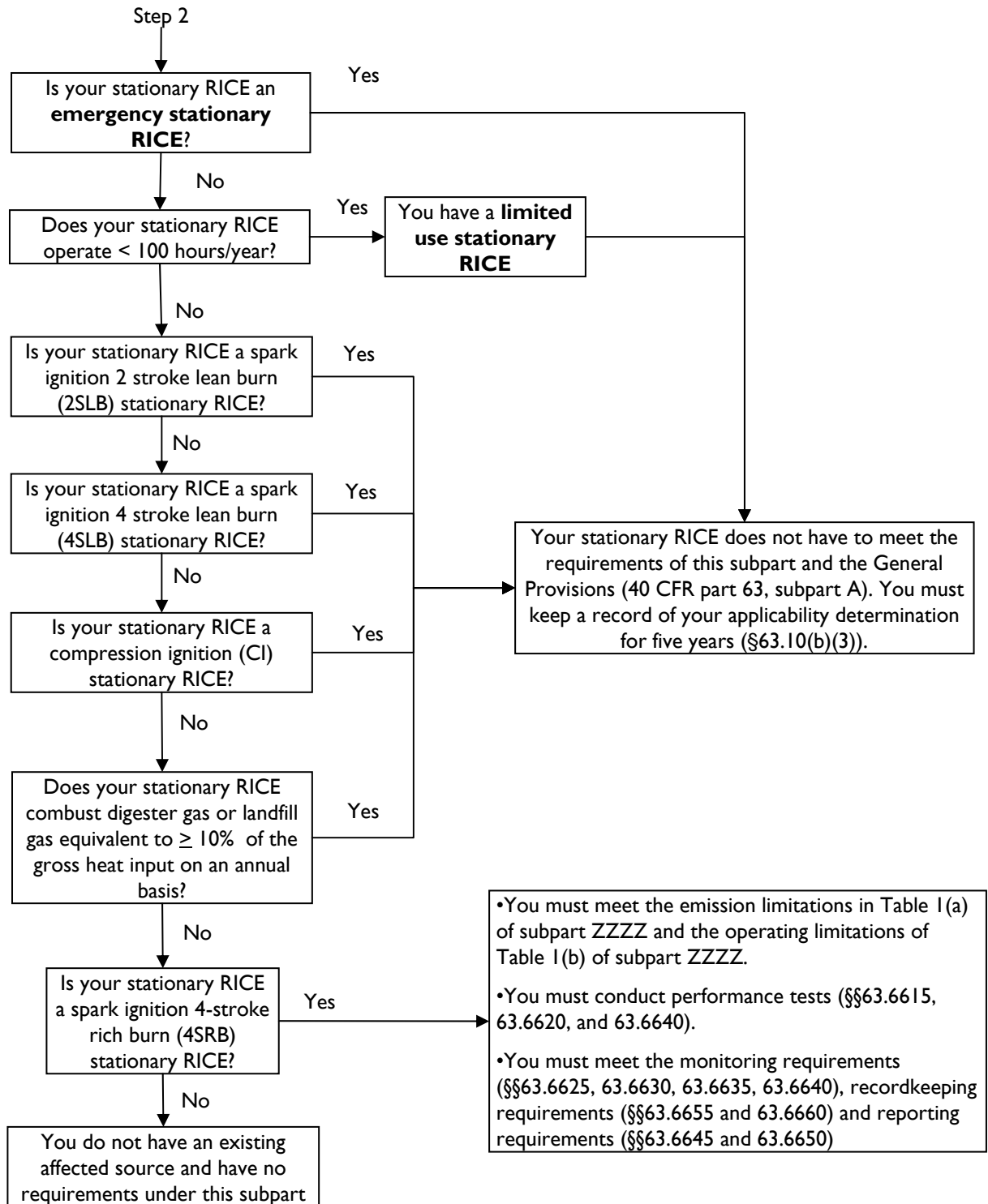
<sup>a</sup> Special non-aggregation provisions apply to oil and natural gas production and natural gas transmission and storage facilities – refer to the definitions for “Major source” and “potential to emit” in subpart ZZZZ.

<sup>b</sup> If your area source increases emissions it may become a major source, and those facilities will become subject. EPA will conduct a future rulemaking for engines located at area sources– proposal expected 10/31/06 and promulgation expected 12/20/07.

<sup>c</sup> Engines less than or equal to 500 bhp and located at major-source facilities will be addressed by EPA in a future rulemaking – proposal expected 10/31/06 and promulgation expected 12/20/07.

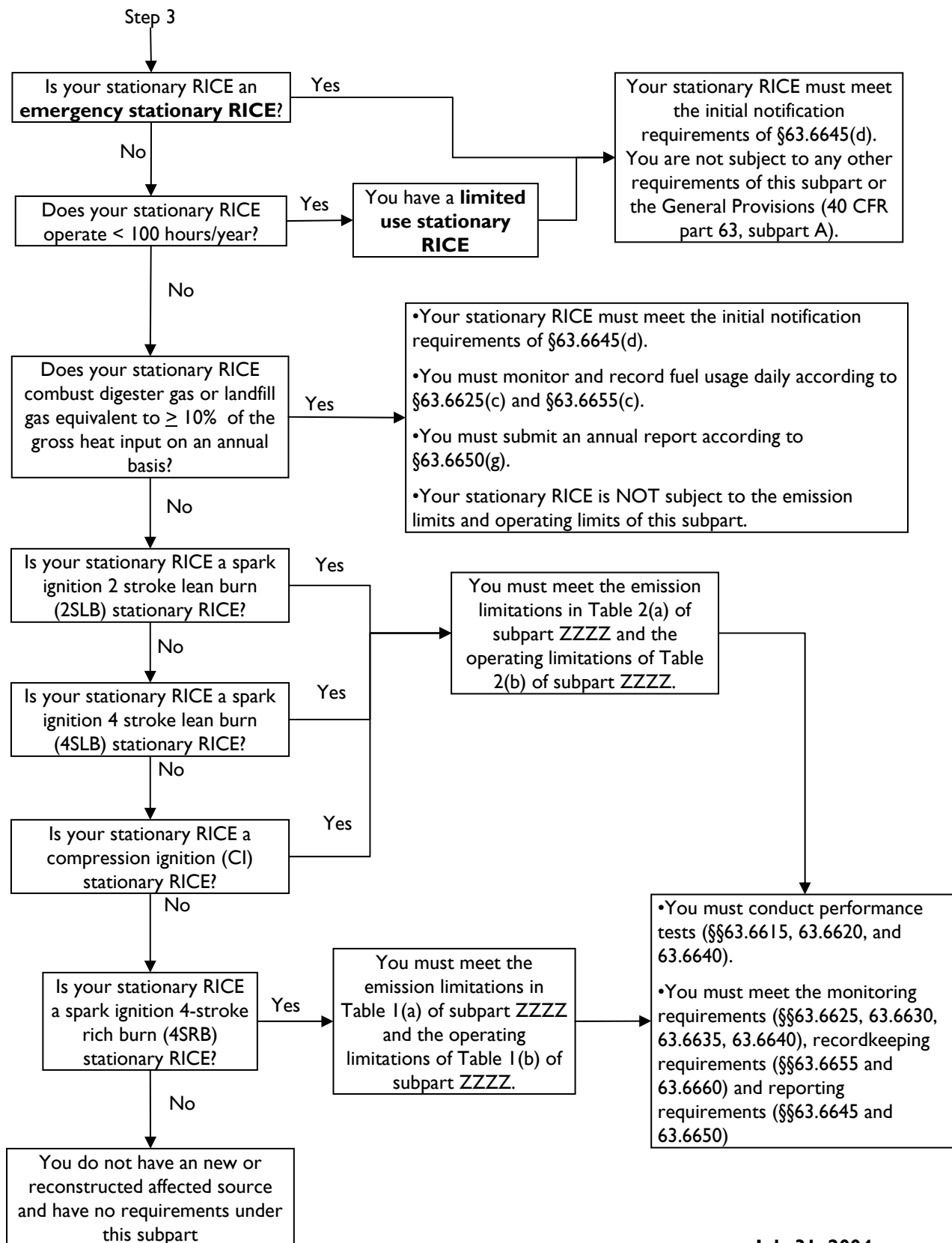
# NESHAP for Existing Stationary RICE

NOTE: This page only refers to requirements for **existing** stationary RICE. If your stationary RICE is **new or reconstructed**, refer to step 3 of this flowchart.



# NESHAP for New or Reconstructed Stationary RICE

NOTE: This page only refers to requirements for **new or reconstructed** stationary RICE. If your stationary RICE is **existing**, refer to step 2 of this flowchart.



July 31, 2004

## KEY DEFINITIONS:

Commenced means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction (§63.2).

Compression ignition engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto ignition, including diesel engines, dual-fuel engines, and engines that are not spark ignition (§63.6675).

Construction means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including, but not limited to, piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in this section. The costs of replacing minor ancillary equipment must be considered in determining whether the existing affected source is reconstructed (§63.2).

Emergency stationary RICE means any stationary RICE that operates in an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE may also operate an additional 50 hours per year in nonemergency situations (§63.6675).

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine (§63.6675).

Reconstruction, unless otherwise defined in a relevant standard, means the replacement of components of an affected or a previously nonaffected source to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
- (2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source (§63.2).

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO<sub>x</sub> (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent (§63.6675).

Spark ignition engine means a type of engine in which a compressed air/fuel mixture is ignited by a timed electric spark generated by a spark plug (§63.6675).

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition (§63.6675).